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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,372	01/02/2001	J. Robert Sims III	10980039-2	2712

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

PORTKA, GARY J

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 09/14/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/753,372

Applicant(s)

SIMS ET AL.

Examiner

Gary J Portka

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 35-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 35-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Remand by the Board of Patent Appeals and Interferences on July 23, 2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-24 and 35-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 35 recite "providing a ... parameter", and claim 15 recites "means for providing a ... parameter". The

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disclosure does not provide a clear description of the steps and structure required to provide the parameters as recited. That is, the disclosure describes the parameters and how they are used but does not specify how they are provided or the means by which they are provided. The remaining claims incorporate these limitations by dependency and thus are rejected for the same reasons.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-24 and 35-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In each independent claim the term "parameter" is used inconsistently. For example in claim 1 it is used to mean a variable ("providing a user area parameter") and also a value of a variable ("selecting the user area parameter"). It is suggested to amend the latter cases to include the word value (i.e., "selecting a value for the user area parameter"). Each dependent claim incorporates these limitations by dependency.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1, 15, and 35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1, 15, and 35 recite a method of providing, or means for providing, two parameters and selecting values for

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those parameters (interpreted as described above under the 35 USC 112 rejection).

Since the disclosure does not specify a particular mechanism by which the parameters are provided and selected, it appears that the claims are intended to simply cover the abstract steps of providing and selecting the parameters. Although the parameters are claimed as selected to provide defect management for the media, the actual steps or means by which they are provided and selected are what is being claimed, and since these steps or means appear to be abstract they are non-statutory. It is further noted regarding claims 1 and 15 that the term media is not by itself necessarily statutory either because it might be interpreted more broadly as any storing or transmission means, such as paper, or the atmosphere (a media for radio waves).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-6, 9-10, 12-19, 21-22, 24, and 35-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Atsatt et al., U.S. Patent 5,983,309.

10. As to claims 1 and 15, Atsatt discloses a *system/method of defect management, comprising:*

a. *User area parameter, and means for providing it, defining a user data area on the media (#LBA_R 63, see Figures 5 and 6, also Figures 16A and 16B, where #LBA_R is shown as 26 for each sparing region of zone 0 shown in Figure 16A; see column 5 lines 31-41, column 9 lines 15-17, column 17 line 66 to column 18 line 3);*

b. *Replacement area parameter, and means for providing it, defining a replacement area on the media (#Slip_R 62, see Figures 5 and 6, also Figures 16A and 16B, where #Slip_R is shown as 6 for each sparing region of zone 0 shown in Figure 16A; see column 5 lines 31-41, column 8 lines 14-22, column 9 lines 12-14, column 18 lines 3-4, column 20 lines 10-14); where the replacement area may be null (since the field may be set to zero), and where the two parameters are selected to determine a distributed sparing configuration and defect management (see column 4 lines 8-9, column 13 lines 23-30, and Figures 12B and 13A, in particular, at boxes 163 and 168, and in general column 19 line 46 to column 20 line 65; in non-recording zone based sparing the two parameters above, #LBA_R and #Slip_R, as well as Cslip, allow the setting up of sparing regions across zones as desired).*

11. As to claims 2 and 16, Atsatt discloses the defect list including information identifying each independently accessible section of user data replacement area (DDT 40, Figure 3, see column 7 lines 40-42, 48-57, and column 7 line 63 to column 8 line 8).

12. As to claims 3 and 17, Atsatt discloses categorizing the sections of the replacement area as to use in replacing, as the status field 31 (see column 7 lines 63-67).

13. As to claims 4 and 18, in Atsatt the categorizing mentioned with regard to claim 3 above includes information regarding defective user data section not recorded within the replacement area (status field 31).

14. As to claim 5, in Atsatt chaining is prevented as recited since consecutive defects require only one entry (see column 8 lines 2-6).

15. As to claims 6 and 19, in Atsatt discloses the recited conditions for selection of user data/replacement parameters causing plural equal size zones (considering the "sparing regions" at column 5 lines 31-41, and column 13 lines 23-30 as the recited zones).

16. As to claims 9-10 and 21-22, in Atsatt, as is apparent from Figure 16A, and because reassigned LBAs may be designated as desired (from column 8 lines 40-43), either area may be disposed on the media first.

17. As to claims 12 and 24, the logical address hierarchy with omission of defective physical addresses, and affect on subsequent media sections, is disclosed in Atsatt (see column 7 lines 48-57 and column 8 lines 1 and 14-22).

18. As to claim 13, in Atsatt the defect list identifies defective sections and omits them from the logical address hierarchy (see column 8 line 1).

19. As to claim 14, in Atsatt the omission of defective physical addresses is in single user data sections (LBAs, see column 7 lines 48-57 and column 8 lines 1 and 14-22).

20. As to claim 35, Atsatt discloses a *method for defect management for block addressable media, comprising:*

a. *Providing a spare interval parameter, establishing number of blocks of user data area on the media (#LBA_R 63, see Figures 5 and 6, also Figures 16A and 16B, where #LBA_R is shown as 26 for the zone 0 shown in Figure 16A; see column 5 lines 31-41, column 9 lines 15-17, column 17 line 66 to column 18 line 3);*

b. *Providing a spare length parameter, establishing number of blocks of user sparing area on the media (#Slip_R 62, see Figures 5 and 6, also Figures 16A and 16B, where #Slip_R is shown as 6 for the zone 0 shown in Figure 16A; see column 5 lines 31-41, column 8 lines 14-22, column 9 lines 12-14, column 18 lines 3-4, column 20 lines 10-14); where the number of blocks of sparing area may be zero (since the field may be set to zero), and where the two parameters are selected to determine a distributed sparing region irrespective of physical zones (see column 4 lines 8-9, column 9 lines 26-29, column 13 lines 23-30, and Figures 12B and 13A, in particular, at boxes 163 and 168, and in general column 19 line 46 to column 20 line 65; in non-recording zone based sparing the two parameters above, #LBA_R and #Slip_R, as well as Cslip, allow the setting up of sparing regions across zones as desired, and thus are selectable to determine sparing regions irrespective of the media zones – see also column 4 lines 8-*

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9, and column 13 lines 23-30), *maintaining a defect list including information identifying each block of user sparing area* (DDT 40, Figure 3, see column 7 lines 40-42, 48-57, and column 7 line 63 to column 8 line 8), *wherein the list includes information regarding status of each block* (status field 31, see column 7 lines 63-67).

21. As to claim 36, Atsatt discloses information of defective block that has not been recorded to replacement area, as the status field 31 (see column 7 lines 63-67).

22. As to claim 37, the logical address hierarchy with omission of initially determined defective physical addresses, and affect on subsequent media sections, is disclosed in Atsatt (see column 7 lines 48-57 and column 8 lines 14-22).

23. As to claims 38 and 40, in Atsatt the sparing configuration, and selection of user and replacement area parameters, is determined irrespective of geometric arrangement due to physical structure, as described with regard to claim 35.

24. As to claim 39, the selection of spare interval and length parameters define defect management for a particular use of the media (inherent).

Allowable Subject Matter

17. Claims 7-8, 11, 20, and 23 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J Portka whose telephone number is (521) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (521) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gary J Portka
Primary Examiner
Art Unit 2188

September 13, 2004